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JPRS L/9928

24 August 1981

# Mongolia Report

(FOUO 1/81)



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COOPERATION BETWEEN USSR, MPR ACADEMIES OF SCIENCES DESCRIBED

Moscow VESTNIK AKADEMII NAUK SSSR in Russian No 6, Jun 81 pp 74-81

/Article by I. A. Surinov: "Cooperation of the USSR Academy of Sciences and the MPR Academy of Sciences"/

/Text/ The Mongolian People's Republic--the country which was first after the Soviet Russia to follow the path of the building of socialism--is celebrating this year the 60th anniversary of the People's Revolution. The triumph of the People's Revolution in 1921 created the conditions for the Mongolian people to overcome many centuries of backwardness, and now under the guidance of the MPRP it is successfully developing its economy, culture and science.

The science of present-day Mongolia was formed with the direct participation of Soviet science. This process was characterized by a short historical period. Mongolia, which prior to the 1921 revolution did not have scientific institutions and scientists, in the 1950's already had higher educational institutions and scientific research institutes, which were established with the assistance of the Soviet Union. In 1961 the highest scientific institution of the country--the Academy of Sciences of the Mongolian People's Republic--was organized.

The cooperation of Mongolian and Soviet scientists is based on the abundant material of the research conducted in Mongolia by prominent progressive scientists of prerevolutionary Russia and on the great experience of the post-October period, when close Soviet-Mongolian relations were established. The names of prominent figures of our domestic science--N. M. Przheval'skiy, N. G. Potanin, D. A. Pozdneyev, P. K. Kozlov, G. Ye. Grumm-Grzhimaylo, M. V. Pevtsov, V. A. Obruchev, B. Ya. Vladimirtsov, S. A. Kozin and many others--have been permanently inscribed in the history of the study of Mongolia. Encyclopedists in their knowledge, they laid the foundations of modern research in this country both in geography and in many fields of geology, biology, history, economics and philology.

In postrevolutionary Mongolia the problem of studying its natural resources for the purposes of their development and the development of the national economy became urgent. The Soviet Union came to the aid of the country, which did not have its own scientists.

In 1925 the Soviet Government established the Mongolian Commission, which then worked from 1927 to 1953 in the Presidium of the USSR Academy of Sciences. The most prominent Soviet scientists: Academicians V. A. Obruchev, B. B. Polynov,

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V. S. Nemchinov, D. S. Belyankin, A. A. Grigor'yev, I. M. Mayskiy, K. I. Skryabin, V. N. Sukachev and others, belonged to it. The commission coordinated the research, which was conducted in Mongolia jointly by Soviet and Mongolian scientific institutions, organized diverse expeditionary operations and published TRUDY MONGOL'SKOY KOMISSII.

The intergovernmental Agreement on Cultural Cooperation, which was signed in 1956, became an important landmark in the development of the scientific relations of the USSR and MPR; on its basis the Agreement on Scientific Cooperation Between the USSR Academy of Sciences and the MPR Committee for Sciences and Higher Education was concluded on 12 December 1960. These agreements became the legal basis of the cooperation of the USSR Academy of Sciences with the MPR Academy of Sciences, which was founded in 1961. They lent Soviet-Mongolian scientific relations great purposefulness and a systematic nature.

The gained experience of cooperation and its steadily increasing tasks, which stemmed from the interests of both parties and entailed the broadening and intensification of the relations in all fields of the natural and social sciences, brought to light the need to conclude a special agreement on scientific cooperation between the USSR and MPR Academies of Sciences. It was signed in Moscow on 3 April 1967 without the limitation of the period of validity.

The agreement contains the following main sections: the performance of joint scientific work and the coordination of research, the exchange of scientific literature and information and reference materials, scientific missions, financial questions.

The years that have passed have confirmed the vitality of the agreement. Two- and three-year interacademy plans of cooperation, which provided for the joint elaboration of specific scientific themes, began to be drafted and signed regularly on its basis. Four multispecialization joint Soviet-Mongolian scientific expeditions with long-term programs: the geological, paleontological, biological and cultural history programs, which made it possible to unite into large collectives the groups of scientists, who prior to this worked separately, were organized. The USSR Academy of Sciences put at the disposal of these expeditions a large fleet of motor vehicles and other equipment for field work.

A characteristic trait of Soviet-Mongolian interacademy cooperation is the close connection between the performance of theoretical, basic scientific research and the solution of social and national economic problems. Academician B. Shirendeb, president of the MPR Academy of Sciences, when delivering in 1971 the report "Mongolian Science on Its 50th Anniversary," especially noted the fruitfulness of scientific cooperation between the scientists of the MPR and the scientists of other socialist countries, first of all the Soviet Union. He emphasized that the fraternal friendship between the peoples of the MPR and the USSR and the extensive cooperation between our countries have played and are playing an accelerating role in the socialist transformations which have occurred in the life of Mongolia over the past 50 years and that this has affected the development of science.

It is necessary to emphasize that since the late 1960's the relations between the scientists of our academies have lost more and more the nature of assistance from the Soviet side and are being transformed into genuine cooperation, to which both parties are making a significant contribution in their mutual interests. Now many

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young Mongolian specialists are undergoing graduate training and are defending dissertations at Soviet academic institutions. But the number of Mongolian scientists who are coming to the institutions of the USSR Academy of Sciences, and Soviet scientists who are coming to the MPR Academy of Sciences for a long period (a year or more) to work in staff positions at the institutes of these academies, where they perform research on urgent themes in the interests of both countries, is increasing with each year. More than 200 scientists of each academy annually go respectively to the USSR and the MPR to work in diverse fields of the natural and social sciences and to take part in various scientific conferences.

In 1971 the Commission for the Scientific Cooperation of the USSR Academy of Sciences and the MPR Academy of Sciences was founded on an equal footing. The commission, to which leading Soviet and Mongolian scientists belong, at its meetings elaborates recommendations on the main directions of the scientific cooperation of the academies. Academician A. P. Vinogradov, vice president of the USSR Academy of Sciences, and H. Tsereb, vice president of the MPR Academy of Sciences, were its first cochairmen. At present Vice President Academician A. V. Sidorenko and Vice President Academician Sh. Tsegmid chair the commission.

Recently, in 1980, the Commission for Cooperation of both academies in the area of the social sciences was established to strengthen the cooperation of the social scientists of the two countries. Academician A. P. Okladnikov chairs its Soviet section, Academician Sh. Bira chairs its Mongolian section.

Leading scientists direct the joint research at both academies. The executive organs of the academies are devoting much attention to the development and intensification of cooperation. The visits of delegations of prominent scientists of the MPR Academy of Sciences to the scientific institutions of Moscow, Leningrad, the Siberian Department and the Far Eastern Scientific Center of the USSR Academy of Sciences, the academies of sciences of Tajikistan, Uzbekistan, Kirghizia and Kazakhstan were important events of Soviet-Mongolian interacademy cooperation. President of the MPR Academy of Sciences and Foreign Member of the USSR Academy of Sciences Academician B. Shirendeb headed the delegations.

Soviet scientists are proud of the high rating in the Mongolian People's Republic of their disinterested contribution to the development of Mongolian science, the training of scientists and the strengthening of Mongolian-Soviet friendship. The USSR Academy of Sciences received with much gratitude the highest award of the MPR--the Order of Sukhe Bator, which it was awarded on its 250th anniversary. Many Soviet scientists, natural scientists and social scientists have been awarded orders and medals of the Mongolian People's Republic. Academicians A. P. Aleksandrov, Ye. M. Zhukov, M. V. Keldysh, Ye. M. Lavrenko, I. M. Mayskiy, A. P. Okladnikov, Ye. K. Fedorov and A. L. Yanshin were elected at different times as foreign members of the MPR Academy of Sciences.

For both academies the year 1975, when a five-year plan of scientific cooperation between them was signed for the first time, was memorable. The plan for 1976-1980 provided for the elaboration of themes which encompassed practically all fields of the natural and social sciences. The group of Soviet academic institutions, which are cooperating with the institutions of the MPR Academy of Sciences, was enlarged considerably: the academic institutes of Minsk, Tashkent, Alma-Ata, Frunze and Ashkhabad have now been added to the institutes of Moscow, Leningrad, Novosibirsk, Irkutsk and Ulan-Ude.

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The direct relations of the scientific institutions of the USSR Academy of Sciences and the MPR Academy of Sciences are being strengthened. The joint work plan of the institutes for each theme of the five-year interacademy problem and thematic plan set forth the obligations of both parties and the necessary conditions of cooperation and became the programs of specific joint operations, which were successfully completed in 1980.

Soviet-Mongolian scientific (interacademy) and scientific and technical cooperation is being carried out in conformity with the decisions of the intergovernmental Soviet-Mongolian Commission for Economic, Scientific and Technical Cooperation, through the state committees for science and technology of the two countries. Joint scientific research expeditions have become an important form of Soviet-Mongolian interacademy cooperation.

The joint Soviet-Mongolian geological expedition (the supervisors are Academician A. L. Yanshin on the part of the USSR Academy of Sciences and Corresponding Member B. Lubsandanzan on the part of the MPR Academy of Sciences) since 1967 has examined extensive territories of the Mongolian People's Republic and has solved a number of questions concerning their geological structure and their history of geological development. The geological map of the republic, which was published in 1971, was revised considerably in accordance with the materials of the expedition, a general tectonic map, a map of the Mesozoic and Cenozoic structures, a map of the granitoid formations and their absolute age, a geological map of the Mongolian Altay Mountains and a geopedological map were compiled and published. Forecasting metallogenic map diagrams for the most important minerals, a geomorphological map, maps of quaternary deposits and geological formations were compiled. The expedition substantiated the existence on the territory of the republic of the large Hobsgol phosphorite-bearing basin and discovered a number of shows of ore, which are of national economic importance. A large number of joint works were published on the basis of the materials of the expedition.

The joint Soviet-Mongolian paleontological expedition (the supervisors are Corresponding Member of the USSR Academy of Sciences L. P. Tatarinov on the part of the USSR Academy of Sciences and R. Barsbold on the part of the MPR Academy of Science), having begun to work in 1969, has collected on the territory of People's Mongolia unique and representative collections of fossil organisms (which for the most part were previously unknown to science). The collections cast light on some key questions of paleontology, biostratigraphy and paleobiogeography, which may be of substantial importance not only for basic science, but also for the solution of individual problems, which are connected with geological prospecting, the establishment of the laws of the distribution of minerals and the forecasting of their prospecting. The results of the joint work of the expedition are published regularly in scientific publications.

The joint Soviet-Mongolian combined biological expedition (the supervisors are Academician Ye. M. Lavrenko on the part of the USSR Academy of Sciences and Corresponding Member Ts. Dabajants on the part of the MPR Academy of Sciences), which has been working since 1970, has gathered large botanical and zoological collections, has compiled maps of the vegetation and soils of the republic, has prepared plans of the use and improvement of the pastures of its state economies, has made a study of the main pests of its agriculture and forestry, has identified promising medicinal and technical plants and the possibilities of their industrial procurement and has outlined the main systems of forestry management and the means of the

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efficient use of the forests of the MPR. The main results of the research have been published.

The joint Soviet-Mongolian cultural history expedition (the supervisors are Academician A. P. Okladnikov on the part of the USSR Academy of Sciences and Academician Sh. Natsagdorj on the part of the MPR Academy of Sciences) during the past decade has discovered on the territory of the republic ancient monuments which are of great importance for casting light on the ancient and medieval history of Mongolia and the peoples of neighboring countries, first of all the peoples of Siberia.

The Institute of History, Philology and Philosophy of the Siberian Department of the USSR Academy of Sciences jointly with Mongolian scientists published the monograph "Sibir", Vostochnaya i Tsentral'naya Aziya v drevnosti" /Siberia, Eastern and Central Asia in Antiquity/. On the basis of the materials of expeditionary work, which had been gathered since 1960, the collective monograph "Arkheologiya i etnografiya MPR" /The Archeology and Ethnography of the MPR/ was prepared and published (Novosibirsk, 1979), a number of other monographic studies, which will play an important role in the development of Mongolian historical science and Soviet Mongolian studies, have been prepared for publication.

The joint scientific expeditions are a good school for the training of highly skilled scientists from among young Mongolian specialists (a large number of doctoral and candidate dissertations were defended on the basis of materials of the expeditions), while the results of the research being performed by the expeditions in a number of instances serve as the basis for the solution of social problems and the efficient use of the natural resources of the republic in the national economy.

The joint work of the institutes of the USSR Academy of Sciences and the scientific institutions of the MPR has been very productive. Thus, in the 1970's the Institute of Natural Sciences of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences conducted work on the theme "The Study of the Properties of a Medium on the Basis of the Peculiarities of the Propagation of Radio Waves" jointly with the Institute of Physics and Technology of the MPR Academy of Sciences. Institutions of the MPR Ministry of Communications and the Mongolian State University participated in the work. Important experimental data were obtained. A map of the parameters of the geoelectrical cross-sections of Mongolia was drawn. Recommendations on the enlargement of the area of television services of Tob and Selenge Aymags of the MPR were elaborated.

The Siberian Power Engineering Institute of the Siberian Department of the USSR Academy of Sciences is performing jointly with the Scientific Research and Design Institute of the Mining and Power Engineering Industry of the MPR work on the theme "The Elaboration of the Procedural Principles of the Optimization of the Fuel and Power Balance of the MPR for the Future (the Optimization of the Fuel and Power Balance of the MPR for the Period 1975-1990)." Mongolian specialists have been given assistance in the development of a linear model of the general power system of the republic; consultations on the method of modeling the fuel and power system and its practical realization and on the methods of predicting the long-range power consumption have been held; the training of Mongolian specialists in the use of mathematical economics models and computers in power engineering calculations has been organized. Within the framework of this joint work, versions of the fuel and power balance and the development of the power system of the MPR for 1980-1990 were calculated by the Mongolian specialists.



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The joint monograph of scientists of the Kazakh SSR Academy of Sciences and the MPR Academy of Sciences, "Khimiya efirnykh masel nekotorykh rasteniy MPR" /The Chemistry of the Essential Oils of Some Plants of the MPR/, was published in Alma-Ata in 1980.

Scientists of the USSR and the Mongolian People's Republic are devoting much effort to the implementation of the Comprehensive Program of Socialist Economic Integration. The scientific institutions of the MPR Academy of Sciences are actively participating not only in bilateral cooperation with the USSR Academy of Sciences, but also in the elaboration of scientific problems within the framework of multilateral cooperation of the academies of sciences of the socialist countries. In conformity with the principles of the Comprehensive Program of Socialist Economic Integration the USSR Academy of Sciences and the Hungary Academy of Sciences, in accordance with the decision of the governments of their countries, in the 1970's gave assistance to the MPR Academy of Sciences in the establishment of the Laboratory of Genetics and in the training of personnel for it.

The relations and cooperation of the scientists of both countries in the area of the social sciences are being actively developed on a bilateral and multilateral basis. Thus, Mongolian scientists are taking an active part in the work of the multilateral problem commission "The History of Great October and Subsequent Socialist Revolutions"; the MPR Academy of Sciences is the coordinator of the working group "The October Revolution and the Noncapitalist Path of Development to Socialism."

The bilateral cooperation of Soviet and Mongolian scientists in the elaboration of the problems of modern and recent history and economics, which are of interest to both parties, is characterized by constant activity.

It is possible to say without exaggeration that the joint work of the scientists of such institutes of the USSR Academy of Sciences as the Institute of Oriental Studies, the Institute of Economics of the World Socialist System, the Institute of History, Philology and Philosophy of the Siberian Department, the Institute of the Far East and the Institute of Scientific Information on the Social Sciences with their colleagues from the institutes of the MPR Academy of Sciences long ago became genuine cooperation. There is not one urgent problem of the present, on which creative discussions and the systematic exchange of know-how and opinions would not be held, joint works would not be published and so on. Scientists of the MPR have worked long periods at these institutes of the USSR Academy of Sciences. During the 1970's Mongolian scientists defended eight doctoral dissertations at the Institute of Oriental Studies alone.

Scientific conferences and sessions, which are devoted to memorable events in the history of Mongolia, are being held at the Institute of Oriental Studies. Representatives of many academic and nonacademic institutions of the USSR deliver reports at them. These conferences and sessions are held with the participation of prominent Mongolian scientists and attract the attention of broad circles of the Soviet public.

Fruitful creative cooperation was established in the 1970's between the Institute of World Literature of the USSR Academy of Sciences and the Institute of Language and Literature of the MPR Academy of Sciences.

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The USSR Academy of Sciences and the MPR Academy of Sciences are constantly taking steps for the further extension and intensification of cooperation and the increase of its effectiveness. Thus, President of the USSR Academy of Sciences Academician A. P. Aleksandrov and President of the MPR Academy of Sciences Academician B. Shirendeb, having discussed at a meeting on 5 December 1978 the progress of Soviet-Mongolian interacademy cooperation, came to an agreement on the implementation of a number of joint measures which are necessary for its even more successful development. At the meetings in 1978-1980 of the executives of the MPR Academy of Sciences with the executives and leading scientists of the USSR Academy of Sciences the productiveness of cooperation was noted and questions of increasing its effectiveness were also discussed. The elaborated recommendations have been implemented by the cooperating institutions.

The academies resolved to establish closer cooperation in the area of patent and licensing work, and in 1979 the Treaty on Joint Patent and Licensing Work was signed.

In 1978 a delegation of the Buryat Affiliate of the Siberian Department of the USSR Academy of Sciences, which was headed by Chairman of the Presidium of the Affiliate M. V. Mokhosoyev, went to Mongolia on the invitation of the Presidium of the MPR Academy of Sciences. A delegation of the MPR Academy of Sciences headed by Academician B. Shirendeb, the president of this academy, made a return visit to the Buryatskaya ASSR in April 1980. The delegations discussed the progress of cooperation and outlined the themes for joint elaboration during the new five-year plan.

Much work has been done at both academies on the preparation of the plan of scientific cooperation for 1981-1985.

On 29 April 1980 in the Presidium of the USSR Academy of Sciences the plan, after the thorough discussion of its draft by the delegations, was signed by Vice President of the USSR Academy of Sciences Academician V. A. Kotelnikov and President of the MPR Academy of Sciences Academician B. Shirendeb.

The need for the close relationship of the research being jointly conducted with the needs of practice and with the solution of social and national economic problems is taken into account in the themes of the new five-year plan to an even greater extent than in the preceding plans. In accordance with the plan joint work will be continued (and in a number of instances will be started) in the area of mathematics, geophysics, heat and mass exchange, the use of solar energy, the development of new means of the chemicalization of agriculture, the chemistry of pharmaceuticals, the geography of the MPR, philosophy, sociology, history, economics and philology. The activity of the geological, paleontological, biological and cultural history expeditions will be extended. The strengthening of the cooperation between the institutions of the MPR Academy of Sciences and the Siberian Department of the USSR Academy of Sciences is envisaged.

During the talks the delegations, having given a high rating to the fruitful results of the joint activity of the academies during 1976-1980, emphasized their own aspiration to make cooperation during the new five-year plan even more effective.

The signed plan is a significant contribution to the further development of comprehensive Soviet-Mongolian scientific cooperation and to the accomplishment of the tasks set for the scientists of our countries by the Communist Party of the Soviet Union and the Mongolian People's Revolutionary Party.

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The article had already been prepared to send for setting, when the report was conveyed throughout the world: the Soyuz-39 space vehicle, which was manned by an international crew--Hero of the Soviet Union Commander Vladimir Dzhanibekov, a pilot-cosmonaut of the USSR, and research cosmonaut Jugderdemidiyn Gurrachaa, a citizen of the Mongolian People's Republic, was in space.

The flight of the Soviet-Mongolian crew is a new vivid display of the fraternal friendship of the USSR and the MPR, a new expression of the cooperation of the scientists of both countries. It is significant that at the Baykonur launch site President of the MPR Academy of Sciences Academician B. Shirendeb as a member of the Mongolian government delegation and Vice President of the USSR Academy of Sciences Academician V. A. Kotel'nikov as chairman of the Interkosmos Council, who had recently signed the plan of scientific cooperation of the two academies for 1981-1985, were among those present who saw off the crew of the Soyuz-39 space vehicle.

During the flight the studies of space for peaceful purposes, which are being conducted by the socialist countries participating in the Interkosmos program, were continued, the planned studies and experiments, which were prepared jointly by the USSR and the MPR, were successfully conducted.

As is known, the Presidium of the USSR Supreme Soviet awarded Hero of the Soviet Union, USSR Pilot-Cosmonaut V. A. Dzhanibekov the Order of Lenin and a second Gold Star Medal for the successful accomplishment of space flight on the Salyut 6-Soyuz orbital scientific research complex and the courage and heroism displayed in so doing; MPR citizen, research cosmonaut J. Gurrachaa was awarded the title of Hero of the Soviet Union with the presentation of the Order of Lenin and the Gold Star Medal.

The Presidium of the People's Great Hural of the MPR awarded V. A. Dzhanibekov and J. Gurrachaa the first cosmonaut of the MPR, the title of Hero of the Mongolian People's Republic with the presentation of the Order of Sukhe Bator and the Gold Star Medal for the successful completion of the joint Soviet-Mongolian flight on the Salyut 6-Soyuz orbital scientific research complex.

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